

4300 Winfield Road Warrenville, IL 60555 630 657 2000 Office

RS-16-159

July 28, 2016

U.S. Nuclear Regulatory Commission ATTN: Document Control Desk Washington, DC 20555-0001

> Dresden Nuclear Power Station, Units 2 and 3 Renewed Facility Operating License Nos. DPR-19 and DPR-25 NRC Docket Nos. 50-237 and 50-249

LaSalle County Station, Units 1 and 2 Facility Operating License Nos. NPF-11 and NPF-18 NRC Docket Nos. 50-373 and 50-374

Quad Cities Nuclear Power Station, Units 1 and 2 Renewed Facility Operating License Nos. DPR-29 and DPR-30 NRC Docket Nos. 50-254 and 50-265

- Subject: Additional Information Regarding Request for License Amendment to Address Secondary Containment Access Openings
- References: 1. Letter from P. R. Simpson (Exelon Generation Company, LLC) to U.S. NRC, "Request for License Amendment to Address Secondary Containment Access Openings," dated February 3, 2016
 - Letter from B. Purnell (U.S. NRC) to B. C. Hanson (Exelon Generation Company, LLC), "Dresden Nuclear Power Station, Units 2 and 3; LaSalle County Station, Units 1 and 2; and Quad Cities Nuclear Power Station, Units 1 and 2 – Request for Additional Information Regarding License Amendment Request to Revise Secondary Containment Access Opening Requirements (CAC Nos. MF7325–MF7330)," dated June 29, 2016

In Reference 1, Exelon Generation Company, LLC (EGC) requested an amendment to Renewed Facility Operating License Nos. DPR-19 and DPR-25 for Dresden Nuclear Power Station, Units 2 and 3, Facility Operating License Nos. NPF-11 and NPF-18 for LaSalle County Station, Units 1 and 2, and Renewed Facility Operating License Nos. DPR-29 and DPR-30 for Quad Cities Nuclear Power Station, Units 1 and 2. The proposed change revises Technical Specifications (TS) 3.6.4.1, "Secondary Containment," Surveillance Requirement (SR) 3.6.4.1.2

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to provide an allowance for brief, inadvertent, simultaneous opening of redundant secondary containment access doors during normal entry and exit conditions.

The NRC requested additional information that is needed to complete review of the proposed change in Reference 2. In response to this request, EGC is providing the attached information.

EGC has reviewed the information supporting a finding of no significant hazards consideration, and the environmental consideration, that were previously provided to the NRC in Attachment 1 of Reference 1. The additional information provided in this submittal does not affect the bases for concluding that the proposed license amendment does not involve a significant hazards consideration. In addition, the additional information provided in this submittal does not affect the bases for concluding that neither an environmental impact statement nor an environmental assessment needs to be prepared in connection with the proposed amendment.

There are no regulatory commitments contained in this letter. Should you have any questions concerning this letter, please contact Mr. Kenneth M. Nicely at (630) 657-2803.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 28th day of July 2016.

Respectfully,

David M. Gullott Manager – Licensing

Attachment: Response to Request for Additional Information

cc: NRC Regional Administrator, Region III NRC Senior Resident Inspector – Dresden Nuclear Power Station NRC Senior Resident Inspector – LaSalle County Station NRC Senior Resident Inspector – Quad Cities Nuclear Power Station Illinois Emergency Management Agency – Division of Nuclear Safety

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NRC RAI-1

Provide assurance that adequate engineered and administrative controls will be used at each facility to ensure that simultaneous opening of the redundant secondary containment access doors will remain brief and infrequent. Describe any internal reporting, documenting, monitoring and trending which will be performed to ensure the adequacy of these controls. Discuss any differences between the current controls and the planned controls following the proposed change.

Response

Dresden Nuclear Power Station (DNPS), LaSalle County Station (LSCS), and Quad Cities Nuclear Power Station (QCNPS) each have multiple secondary containment access openings that can be used to access the reactor building while the unit is online. Each of these access openings has some form of control, either engineered or administrative, to prevent the simultaneous opening of more than one door in an access opening. The engineered controls consist of interlocks that prevent two doors from being opened simultaneously and door alarms. The administrative controls consist of training and communication to station personnel, door signage, and in some cases procedural requirements to contact other station organizations (e.g., Security, Radiation Protection, or Main Control Room personnel) to obtain permission prior to traversing through a door. The proposed license amendment does not impact the existing engineered and administrative controls.

The intent of the proposed change is to allow for brief, inadvertent, simultaneous opening of redundant secondary containment access doors during normal entry and exit. Inadvertent, simultaneous opening of redundant doors could occur if, for example, an interlock were to fail due to an equipment issue. In that case, the equipment issue would be entered into the Corrective Action Program for evaluation and disposition. This ensures that internal reporting, documenting, monitoring, and trending are performed to ensure the adequacy of the controls. In addition, interlock performance at each station is monitored through the Maintenance Rule program.

NRC RAI-2

Provide a quantitative comparison of the time with which both doors may be opened simultaneously to the margin in the secondary containment drawdown time assumed in the design-bases analysis for each facility. Explain how the functional capability of secondary containment and the SGT system will be maintained during brief, inadvertent, simultaneous opening of the inner and outer access doors.

Response

The intent of the proposed change is to allow for brief, inadvertent, simultaneous opening of redundant secondary containment access doors during normal entry and exit. The proposed change does not involve planned simultaneous opening of redundant secondary containment access doors. The proposed Surveillance Requirement (SR) 3.6.4.1.2 wording uses the phrase

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"being used for entry and exit" to ensure that the time both doors may be open simultaneously is limited to the time it takes to traverse through a door, which is insignificant.

The DNPS and QCNPS alternative source term analyses do not assume an explicit secondary containment drawdown time. The reactor building ventilation system maintains the reactor building atmosphere at a slight negative pressure during normal plant operation. In the event of a design basis loss-of-coolant accident, secondary containment instrumentation automatically initiates closure of appropriate secondary containment isolation valves and starts the Standby Gas Treatment (SGT) system to limit fission product releases.

The LSCS alternative source term analyses assume a 15 minute reactor building drawdown time. LSCS SR 3.6.4.1.3 requires verification that the secondary containment can be drawn down to \geq 0.25 inch of vacuum water gauge in \leq 900 seconds using one SGT subsystem.

A review of Licensee Event Reports (LERs) submitted to the NRC since 2014 was performed for DNPS, LSCS, and QCNPS to determine whether the functional capability of secondary containment was maintained during previous events involving brief, inadvertent, simultaneous opening of secondary containment access doors. Specifically, the following LERs were reviewed.

Plant	LER Number	Title
DNPS	2014-001	Secondary Containment Inoperable Due to Two Interlock Doors Being Open Simultaneously
DNPS	2015-003	Unit 2 Turbine Building to Reactor Building Interlock Doors Open Simultaneously
LSCS	2014-001	Secondary Containment Inoperable Due to Interlock Doors Open
LSCS	2014-003	Secondary Containment Inoperable Due to Interlock Doors Open
LSCS	2015-001	Secondary Containment Inoperable Due to Interlock Doors Open
LSCS	2015-003	Secondary Containment Inoperable Due to Interlock Doors Open
LSCS	2016-001	Secondary Containment Inoperable Due to Interlock Doors Open
QCNPS	2014-002	Reactor Building Interlock Doors Opened Simultaneously Cause Loss of Secondary Containment
QCNPS	2014-003	HPCI Interlock Doors Opened Simultaneously Cause Loss of Secondary Containment

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Plant	LER Number	Title
QCNPS	2014-004	Reactor Building Interlock Doors Opened Simultaneously Cause Loss of Secondary Containment
QCNPS	2015-002	HPCI Interlock Doors Opened Simultaneously Cause Loss of Secondary Containment
QCNPS	2015-006	Interlock Doors Opened Simultaneously Cause Loss of Secondary Containment
QCNPS	2015-008	Interlock Doors Opened Simultaneously Cause Loss of Secondary Containment

For each event documented in the LERs listed above, secondary containment differential pressure was maintained. Therefore, it is reasonable to conclude that the functional capability of secondary containment is maintained during events involving brief, inadvertent, simultaneous opening of secondary containment access doors.